



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,735	11/15/2001	Mohammad Hajaligol	021238-410	7422

7590 01/29/2003

Peter K. Skiff, Esq.  
BURNS, DOANE, SWECKER & MATHIS, L.L.P.  
P.O. Box 1404  
Alexandria, VA 22313-1404

EXAMINER

LOPEZ, CARLOS N

ART UNIT PAPER NUMBER

1731

DATE MAILED: 01/29/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/987,735

Applicant(s)

HAJALIGOL ET AL.

Examiner

Carlos Lopez

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1) Claims 1,2, 14-15,16,18, 26-27, and 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1,16,and 18, "the cigarette paper wrapper" lacks antecedent basis. In claim 18, "the cigarette" lacks antecedent basis.

In claim 2 and 19, it is unclear if the final porosity is increased from 30% to about 60% or is the final porosity has a range of about 30% to 60%. Clarification is needed.

In claim 15, 27 and 32, "the paper" lacks antecedent basis.

In claim 29-30, "the paper" and "the total weight" lack antecedent basis.

In claims 14-15, 26-27, and 31-32, its unclear if the size of the heat degradable particle is referring to its diameter, length, width or thickness. Clarification is need since applicant defines a heat degradable fiber as a polymer and a salt.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**2)** Claims 1, 6-13, 16-18, 20-25 rejected under 35 U.S.C. 102(b) as being anticipated by Figge (US 2,992,647). Figge discloses cigarette comprising heat degradable filler particles in the cigarette paper wrapper, which are melted/dissipated during smoking of the cigarette (Column 2, lines 50-72); results in an increased porosity of the cigarette paper (Column 2, lines 55ff).

As for claims 6-8 and 21-22, the particles may dissipate in a temperature between 35 to 250°C (Column 2, line 63ff).

As for claims 9-11 and 23-25, the heat degradable filler particles may be polyethylene cellulose or monosodium phosphate (MSP) (Column 2, lines 66ff).

As for claims 12-13, as shown by Figge (Column 3, lines 22-46), the heat degradable filler particles will dissipate at Applicant's claimed distance depending on the melting point of the filler particle.

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

**3)** Claims 1, 6-8, 12, 16-18, 20-22 rejected under 35 U.S.C. 102(b) as being anticipated by Adam et al (US 4,784,164). Adams discloses cigarette comprising heat degradable filler particles in the cigarette paper wrapper, which are melted/dissipated during smoking of the cigarette (Abstract), to open the perforations blocked by the heat degradable filler particles. The unplugging of the perforations due to the melting of the heat degradable filler particles results in an increased porosity of the cigarette paper.

As for claims 6-8 and 20-22, the particles may dissipate in a temperature generally above 50°C but below 150°C (Column 4, line 5ff).

As for claims 12, as shown by Adam above, it is inherent that the heat degradable filler particles will dissipate at Applicant's claimed distance as evidenced by Figge (See Column 3, lines 22ff of Figge).

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

4) Claims 1, 3, 4, 10, 14-18, 24 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamol (US 3,526,904). Tamol discloses cigarette comprising heat degradable filler particles (polyethylene oxide) in the cigarette paper wrapper, which are melted/dissipated during smoking of the cigarette (Abstract), to open the perforations blocked by the heat degradable filler particles. The unplugging of the perforations due to the melting of the heat degradable filler particles results in an increased porosity of the cigarette paper.

As for claim 3-4, air dilution increase from 19% to 42% (Example 3).

As for claim 2, in view that Tamol provides shares the same air dilution as claimed by applicant, the claimed porosity would be inherent in Tamol.

As for claim 14-15 and 26-27, a size parameter of the particle may be 3 to 60 microns (Column 5, line 75).

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1731

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5)** Claims 2-5, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Figge (US 2,992,647). As pointed out by Figge, as the heat degradable filler particles dissipate, perforations on the wrapper will open resulting in an air dilution that would prevent the combustion temperature of the cigarette to exceed 650-700°C (Column 2, lines 21ff). Figge also teaches that combustion temperatures above 700°C produce major quantities of carcinogens (Column 4, lines 44-46) and thus it is advantageous to prevent the combustion temperature from exceeding 700°C. In view that air dilution may be used to accurately control the combustion temperature range (Column 4, lines 42-43) and that applicant's combustion temperature is maintained at about 600 to 750°C, one of ordinary skill in the art at the time the invention was made would have provided air dilution and porosity as claimed by Applicant to control the combustion temperature from going above 700°C because it would prevent major quantities of carcinogens to be produced that result from a combustion temperature above 700°C.

**6)** Claims 1, 9, 10, 16-18, 23-24, and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dashley et al (US 4,607,647). Dashley teaches adding a heat degradable filler particle, ethylene vinyl acetate (EVA), to a cigarette wrapping paper (Abstract). Dashley is silent disclosing the heat degradable filler particle capable of being dissipated during smoking to increase the porosity of the cigarette paper wrapper. In view that Dasley meets the limitations of claims 1, 16, and 18, reciting a cigarette

paper wrapper having a heat degradable filler particle which is defined by Applicant to include EVA, it would be obvious to one of ordinary skill in the art that the additional limitation of increasing the porosity of the cigarette paper wrapper, would be expected in the Dashley cigarette paper wrapper.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke is well known in the art.

As for claim 28, Dashley teaches that the heat degradable filler particle may be added to in the papermaking stage (Column 2, lines 11-13), thus it would be expected that the heat degradable filler particle would be added to the feedstock, a known conventional point of addition for additives in the papermaking art.

The term "up to" may include zero as its lower limit (In re Mochel (CCPA) 176 USPQ 194, the mere presence of EVA meets the limitations set forth in claims 29-30.

As for claim 31-32, the claimed size of the cellulose would be expected to have the claimed size range.

As for claims 33-35, the cellulose would dissipate at the claimed temperature range.

7) Claims 1,10, 16-18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes et al (US 5,105,837). Barnes teaches adding a heat degradable filler particle, disodium phosphate, to a cigarette wrapping paper (Claim 8). Barnes is silent disclosing the heat degradable filler particle capable of being dissipated during smoking to increase the porosity of the cigarette paper wrapper. In view that

Barnes et al meet the limitations of claims 1, 16, and 18, reciting a cigarette paper wrapper having a heat degradable filler particle which is defined by Applicant to include disodium phosphate, it would be obvious to one of ordinary skill in the art that the additional limitation of increasing the porosity of the cigarette paper wrapper would be expected in the Barnes et al cigarette paper wrapper.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke is well known in the art.

**8)** Claims 1,9, 11, 16-18, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson et al (US 5,878,754). Barnes teaches adding a heat degradable filler particle, ethyl cellulose, to a cigarette wrapping paper (Claim 6). Peterson et al is silent disclosing the heat degradable filler particle capable of being dissipated during smoking to increase the porosity of the cigarette paper wrapper. In view that Barnes et al meet the limitations of claims 1, 16, and 18, reciting a cigarette paper wrapper having a heat degradable filler particle which is defined by Applicant to include ethyl cellulose, it would be obvious to one of ordinary skill in the art that the additional limitation of increasing the porosity of the cigarette paper wrapper would be expected in the Barnes et al cigarette paper wrapper.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke is well known in the art.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

C.L  
January 22, 2003